

Appn. No. 10/624,378
Amdt. Dated May 9, 2005
Reply to Office Action dated: Feb. 9, 2005

Remarks/Arguments

These remarks are in response to the Office Action dated February 9, 2005. This reply is timely filed.

At the time of the Office Action, claims 1-32 were pending in the application. Claims 13-15 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 13-15 have been amended to correct these errors and are now believed to be in condition for allowance. Claims 1, 12, 16-17, 19, 21 and 30-32 were rejected under 35 U.S.C. 103(a). Claims 19, 21, 23, 24, and 26-32 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting. The rejections are set out in more detail below.

I. Brief Review of Applicants' Invention

Prior to addressing the Examiner's rejections on the art, a brief review of applicants' invention is appropriate. The invention relates to a variable waveguide attenuator that includes at least one waveguide attenuator cavity. A fluidic dielectric having a loss tangent, a permittivity and a permeability is at least partially disposed within the waveguide attenuator cavity. At least one composition processor is included and adapted for changing a physical characteristic and/or an electrical characteristic of the variable waveguide attenuator. For instance, the composition processor can selectively vary the shape and/or volume of the fluidic dielectric while selectively varying the loss tangent, the permittivity and/or the permeability of the fluidic dielectric. A controller is provided for controlling the composition processor.

II. Claim Rejections on Art

Claims 1, 12, 16-17, 19, 21 and 30-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,604,592 to Pinson in view of U.S. Patent No. 6,743,371 to John et al. Amended claims 1 and 19 recite, inter alia, dynamically changing an electrical characteristic and/or a physical characteristic of a waveguide by manipulating a fluidic dielectric to selectively vary at least one parameter selected from the group consisting of a volume and a shape, and selectively vary at least one

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parameter selected from the group consisting of a loss tangent, a permittivity and a permeability of said fluidic dielectric. None of the cited references teach or suggest this limitation. Instead, Pinson teaches merely changing the position of a ferromagnetic fluid, but does not suggest changing a loss tangent, permittivity or permeability of the ferromagnetic fluid. Similarly, John also fails to suggest changing a loss tangent, permittivity or permeability of the ferromagnetic fluid. Instead, John applies a magnetic field to a fluid to change the conductivity of the fluid. Accordingly, Claims 1 and 19 are believed to be allowable over the cited references. Claims 12, 16, 17, 21 and 30-32 are believed to be allowable at least based on their dependence on an allowable base claim.

III. Double Patenting

Claims 19, 21, 23, 24, and 26-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/414,696. Claim 19 has been amended and is believed to be patentably distinct from claims 1-18 of the co-pending Application. Accordingly, withdrawal of these rejections is respectfully requested.

IV. Allowable Subject Matter

Claims 2-11, 18, 20 and 22 were objected to as being dependent upon a rejected base claim, but were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 2-11, 18, 20 and 22 have been amended accordingly, and thus are believed to be in condition for allowance.

V. Conclusion

For the foregoing reasons, this entire application is believed to be in condition for allowance. Consequently, such action is respectfully requested. The Applicants

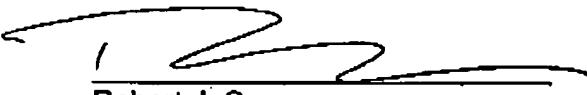
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request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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Date



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